

# **SMALL TRANSPORT AIRPLANE HARMONIZATION WORKING GROUP STATUS REPORT**

APRIL 25, 2002

BY BILL SCHULTZ  
ON BEHALF OF CO-CHAIR  
JON HAAG PMMC

# **ATSRAC SMALL TRANSPORT HWG-10 AGENDA**

- **ATSRAC AGREEMENT TO FORM HWG-10**
- **OFFICIAL HWG ESTABLISHED 3-4-02 FRN**
- **HWG-10 MEMBERSHIP**
- **EVAL PROTOCOL / TEAMS / AIRPLANES**
- **AIRPLANE EVALUATION SCHEDULE**
- **OEM REPORTS**
- **HWG 10 RECOMMENDATIONS RELEVANCE**
- **HWG RECOMMENDATIONS TO ATSRAC**

# HWG-10 FORMATION / TASKING

- Small Transport Working Group Began Meeting Proactively and Informally in Fall 2001
  - Primary Focus: For Airplane Wiring Systems, Determine the Degree That Conclusions For Large Transport Airplanes Apply to Small Transports and Identify any Issues Unique to Small Transports
- January 24, 2002 ATSRAC Voted to Form HWG-10 for Small Transport Airplanes with 6-30 Passengers and Up to 7500# Payload
- 67FR 9799 Official Formation of Small Transport Airplane HWG

# HWG-10 FORMATION / MEMBERSHIP

Philip Morris

Vacant

AEA

ALPA

Bombardier

Cessna

Dassault

Duncan Aviation

FAA

GAMA

Gulfstream

Honeywell

NATA

NBAA

New World Jet

Pizza Hut

Raytheon

Regourd Aviation

Transport Canada

Underwriters Lab

Jon Haag (Co-chair)

(Co-chair)

Ric Peri

Ken Elias

Manny Gdalevitch

Michael Richardson

Dominique Bellon, Karl Eisenmenger, Michel Larhantec

Ron Grose, Peter Phillips

Barry Ballenger, Massoud Sadeghi, Rob Pappas, Jack West

Bill Schultz

Steve O'Neal

Francois Gau

Eric Byer

Eli Cotti

Robert Marinace

George Miller

Frank Keefer

Bertrand d'Yvoire

Bill Miller

Richard Wagner

# HWG-10 FORMATION / TASKING (Cont)

- Official Formation:
  - To Provide Technical Support In Developing Its (ATSRAC) Recommendations to FAA
  - HWG Will Establish Working Methods to Ensure Coordination With HWG's 6-9 and the ARAC.
  - 6-30 Pax and 7500# Max Payload Capacity

# HWG-10 FORMATION / TASKING (Cont)

- Official Tasking:
  - 1. Investigate Applicability of ATSRAC Recommendations to Small Transport Airplanes Electrical Wire Systems

# HWG-10 FORMATION / TASKING (Cont)

- Official Tasking Cont:
  - Identify Issues Unique to These Systems and Recommend Appropriate Actions Based on Results From:
    - Sample Inspections of In-Service & Retired STA that Correlate to Inspections Under Tasks 1&2
    - Fleet Service History Review to Identify Trends/Areas of Action, and
    - Coordinate with Other ATSRAC HWGs to Ensure ATSRAC Reports to FAA Consider the Needs of STAs

# HWG-10 OFFICIAL REPORTING

- Recommend a Working Plan for Completion of the Tasking Including the Rationale Supporting Such a Plan for Consideration by ATSRAC
- Give a Detailed Conceptual Presentation of Proposed Recommendations Prior to Proceeding with Work Statement in the Next Bullet
- Draft a Report and/or Cite Any Other Collateral Documents the HWG Determines to be Appropriate and Submit Them to ATSRAC for Review and Approval by January 2003
- Provide a Status Report at Each ATSRAC Meeting



# ATSRAC HWG-10 EVALUATION PROTOCOL

- Generic Protocol
  - Nearing Final 4-23-02
  - Expect Completion in 30 Days
- Training of HWG Team Members 4-22-02
- Airplane Specific Evaluation Protocols
  - OEM/Mfgs Developing Now
  - Expect Drafts by Mid-May

# ATSRAC HWG-10 EVALUATION PROTOCOL

Deteriorated Repair	A currently dysfunctional wire splice assumed to have met requirements when established (e.g. a splice originally established to be environmentally sealed but no longer so). Does not includes inappropriate or unacceptable repair practice ??.
Heat Damage or burnt wire	Thermal damage to insulation resulting from the presence of elevated temperature over some extended period of time.
Vibration Damage/Chafing	Insulation wear (material loss) resulting from the repeated application of a force which if applied only once would not result in noticeable damage.
Cracked Insulation	A breach in the wire insulation resulting from internal stresses in excess of the local strength of the polymer. Does not include tearing resulting from direct physical contact with other material (e.g. knife cut).
Arcing	Localized burnt spot on one or more wires indicating one or more instantaneous discharges of electrical energy.
Delamination	The unraveling of a tape-wrapped insulation. The separation of layers of insulation in a multilayered construction.
Component Damage/Failure	Obvious damage of failure of components (connector, claps, tie wraps, etc
Improper Installation	Slack, bend radius, strain, wire spares/unused, routing, drip loops, drip hold
Contamination	Dust, fluids, FOD, etc.
Corrosion	

# ATSRAC HWG-10 EVALUATION TEAMS / AIRPLANES

- 5 Evaluation Teams\*
  - OEM/Mfgrs: Bombardier/Cessna/Dassault/Gulfstream/Raytheon
  - Operators: TBD
  - Authorities: FAA, TC, JAA
- Aiming for Approximately 30 Airplanes
  - 2 Evaluations Completed in Canada
  - 2 OEM Evals Completed in France Per SB
  - 2 In Europe-May/June
  - Remaining to be Scheduled Soon
  - Very Volatile Program Aspect

# **ATSRAC HWG-10 EVAL FINDINGS/ RESULTS AND RECOMMENDATIONS**

- OEM Mfgs Reports
- Relevance Evaluation Results
- Recommendations to ATSRAC